i2 summit 2011
innovation in intervention
ACC in partnership with CRF

E1838
JACC April 5, 2011
Volume 57, Issue 14

i2 SUMMIT

LONG-TERM SERIAL ANGIOGRAPHIC OUTCOMES AFTER SIROLIMUS-ELUTING STENT IMPLANTATION: CONTEMPORARY PRACTICE IN REAL WORLD POPULATION

i2 Poster Contributions
Ernest N. Morial Convention Center, Hall F
Monday, April 04, 2011, 9:30 a.m.-10:45 a.m.

Session Title: PCI - DES III
Abstract Category: 16. PCI - DES (clinical/outcomes)
Session-Poster Board Number: 2508-537

Authors: *Euihong Ko, Kenya Nasu, Daisuke Yokota, Tsuyoshi Itoh, Maoto Habara, Tairo Kurita, Yoshihisa Kinoshita, Etsuo Tsuchikane, Osamu Katoh, Takahiko Suzuki, Toyohashi Heart Center, Toyohashi, Japan*

Background: Although percutaneous coronary intervention (PCI) with drug-eluting stent (DES) has significantly reduced the rate of repeated target-lesion revascularization, the results from a few studies recently raised concerns on late restenosis of DES. Limited data is available examining serial angiographic outcomes.

Methods: A total of 4,428 lesions were treated with sirolimus-eluting stent (SES) from June 2004 to Jun 2009 in our institution. Of those, 424 lesions without restenosis at early follow-up (9.5 ± 2.4 months, range: 6.3 to 25.6 months) had late follow-up angiography (22.3 ± 6.7 months, range: 24.2 to 50.1 months). We evaluated serial angiographic outcomes and predictors of late restenosis among patients treated with SES > 2 years after the index procedure.

Results: Minimal lumen diameter (MLD) of overall lesions significantly decreased during follow-up (2.82 ± 0.48 mm, 2.68 ± 0.50 mm and 2.55 ± 0.66 mm at post-procedure, early follow-up and late follow-up, respectively; $p < 0.0001$). Late loss (LL) of overall lesions also increased significantly during follow-up (0.14 ± 0.26 mm and 0.27 ± 0.52 mm at early follow-up and late follow-up; $p < 0.0001$). In addition, MLD at early follow-up significantly decreased in patients with late restenosis compared to without late restenosis (2.36 ± 0.32 mm vs. 2.71 ± 0.51 mm; $p < 0.0001$). LL also increased significantly in patients with late restenosis compared to without late restenosis (0.49 ± 0.28 mm vs. 0.11 ± 0.24 mm; $p < 0.0001$). There were several predictors of late restenosis identified on univariate analysis such as diabetes mellitus ($p = 0.030$, OR = 1.006, 95% CI = 1.002-1.010), MLD, LL and percent diameter stenosis at early follow-up ($p < 0.0001$, OR = 0.125, 95% CI = 0.049-0.318 and $p < 0.0001$, OR = 23.194, 95% CI = 10.455-51.457, OR = 1.121, 95% CI = 1.079-1.166).

Conclusions: Although late regression was observed in BMS era, significant and continuous progression > 2 years after SES implantation was observed in our study. Further investigations are needed to evaluate the clinical significance of late restenosis and whether SES only delays the process of neointimal hyperplasia rather than prevent.